

REMARKS

In the Office Action dated July 2, 2008, the Examiner rejects claims 1, 4, 6-10, 13, 19 and 21-23 under 35 U.S.C. §102(b) and rejects claims 2, 3, 5, 11, 12 and 20 under 35 U.S.C. §103(a) as being unpatentable over Sugitani et al. Claims 10 and 15 are also objected to because of informalities. With this Amendment, claims 1-7 and 9-17. No claims have been canceled or added. After entry of this Amendment, claims 1-23 are pending in the Application. Applicants respectfully request reconsideration of the application as amended.

Claims 10 and 15 have been amended to overcome the objections from the Examiner.

The Examiner rejects claims 1, 4, 6-10, 13-19 and 21-23 under 35 U.S.C. §102(e) as being anticipated by Sugitani et al. (U.S. Pub. No. 2004/0200661 A1). The Examiner states that Sugitani et al. shows all of the structural elements as claimed and states that the structure of Sugitani would result in all of the methods steps of claims 19 and 21-23. The Examiner further takes position that the terms “adapted to” are not positive limitations, but only require the ability to so perform and, therefore conclude that Sugitani et al. meets all of the functional language.

The Examiner further rejects claims 2, 3, 5, 11, 12 and 20 under 35 U.S.C. §103(a) as being unpatentable over Sugitani et al. The Examiner admits that Sugitani et al. does not disclose the use of a steering wheel angular velocity as one of the elements for varying the control signal. However the Examiner takes position that selecting any one of such elements (steering wheel angular velocity, vehicle speed, yaw rate, wheel angle, wheel torque, etc.) would have been obvious to one ordinary skill in the art so as to allow the device to fit a wider range of applications.

Initially, Applicants submit that the Examiner’s position with respect to the language “adapted to” is not a positive limitation is not supported by any law. All language of the claim should be considered, and such *per se* rules have been dismissed by the Federal Circuit. Nonetheless, to further prosecution, Applicants have changed the term “adapted to” such that the controller is “configured to”. Accordingly, the controller is configured to perform specific steps. As a result the controller is a special purpose computer, as opposed to a general purpose computer. As stated by the Federal Circuit,

“...such programming creates a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.” *In re Alappat*, 31 U.S.P.Q. 2d 1545, 1558 (Fed. Cir. 1994). A special purpose computer programmed to perform a particular function is structurally distinguishable from a general purpose computer or another special purpose computer that is not programmed to perform the claimed functions.

Specifically, with regard to claim 1, the Examiner fails to cite any portion of Sugitani et al. that teaches or suggests a controller that is configured to determine that the reaction force is larger when the steering wheel is turned than when the steering wheel is returning. Similarly, the Examiner fails to cite any portion of Sugitani et al. that teaches or suggests distinguishing the movement of the steering wheel in turning or returning condition. Applicants have carefully reviewed Sugitani et al. and have concluded that neither of these features is taught or suggested therein. Claim 1 and its dependent claims are allowable over Sugitani et al.

Regarding claims 2 and 3, Sugitani et al. additionally does not disclose or show a controller that is configured to monitor the steering wheel angular velocity. Sugitani et al. merely discloses monitoring the steering angle sensor and the vehicle speed sensor. Sugitani et al. does not disclose the controller configured to vary the control signal to decrease the steering reaction force at higher steering angular velocities. Therefore, claims 2-3 are allowable for this reason in addition to their dependency from claim 1.

Regarding claim 6, Sugitani et al. additionally does not show or disclose a controller that is configured to calculate the vehicle state and estimated steering force correction value based on the vehicle state and to vary the control signal as a function of the estimated steering force correction value. Therefore, claim 6 is allowable for this reason in addition to its dependency from claim 1.

Regarding claim 9, Sugitani et al. does not show or disclose a controller that is configured to calculate whether the vehicle is in a rotation limit based on the angle of the wheels and the yaw rate of those vehicles and wherein the controller is configured to not reduce the steering reaction force when the controller determines that the vehicle is

within the rotation limit. Therefore, claim 9 is allowable for this reason in addition to its dependency from claim 1.

Regarding claim 10 and its dependent claims, the arguments with respect to claim 1, *supra*, also are applicable thereto. Therefore, claim 10 and its dependent claims are allowable over Sugitani et al.

Claim 18 does not include the language “adapted to” that is improperly ignored by the Examiner. Instead, claim 18 is written in “means for” language. As is clear from Federal Circuit case law, a “computer-implemented means-plus-function term is limited to the corresponding structure disclosed in the specification and equivalents thereof, and the corresponding structure is the algorithm.” *Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1253 (Fed. Cir. 2005). Sugitani et al. fails to teach or suggest an algorithm that calculates the steering force control signal based on a road surface reaction force and a gain, determines whether the steering wheel is in a turning or returning mode and sets the gain at a higher value when the steering wheel is in a turning mode. Thus, claim 18 is also allowable over Sugimoto et al.

Regarding method claim 19 and its dependent claims, Sugimoto et al. does not show or disclose determining whether the steering wheel is in a turning mode and further setting the gain at a higher value when the steering wheel is in a turning mode. Applicants further submit that the Examiner’s position that structure of Sugitani et al. would result in all the method steps of these claims having been performed is essentially an argument that the steps are inherent in Sugitani et al. Applicants respectfully submit that a claim can only be inherently anticipated if the missing limitation is necessarily present in the prior art. *Schering Corporation v. Geneva Pharmaceuticals, Inc.*, 339 F.3d 1373, 1377-1378 (Fed. Cir. 2003). Applicants submit that the Examiner has failed to show that the claimed features are necessarily present in Sugitani et al., so claim 19 and its dependent claims are allowable.

This amendment places this case in condition for passing to issue. Such action is requested. If the Examiner feels that prosecution of the present application can be expedited by way of an Examiner's amendment, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

YOUNG BASILE HANLON MACFARLANE &
HELMHOLDT, P.C.

Darlene P. Condra

Darlene P. Condra.
Registration No. 37113
(248) 649-3333

3001 West Big Beaver Rd., Suite 624
Troy, Michigan 48084-3107
DPC/jas